

feeding were very 'blistered' and almost completely hollowed-out. Several cases were found attached upside down to the developing flower heads or on adjacent foliage.

Further cases were found on 11.vi. and 15.vi. although by the latter date the cases were much scarcer and several recent feedings were found but the cases had moved off. The distribution of the cases was very localised, and all were found on the exposed open downland in longish grass; none were under the protection of bushes or at the edge of paths which has previously been suggested as preferred locations.

On the 13.vi. I visited an area of downland at Stockbury to collect fresh foodplant and pausing to glance at the *Helianthemum*, to my delight the first plant I peered at had been eaten by *C. ochrea* and within about half-an-hour further search produced nine cases.

I potted up a few plants leaving them in full sun and later reared a fine series between 20.vi. and 11.viii.1983.

On 23.vi.1907, H. J. Turner in company with Mr. J. Ovenden of Strood records in *Ent. Rec.* 24:281-282 finding larvae in abundance and full fed at Cuxton at a spot where some years before J. W. Tutt had taken the imagines in abundance.

The earliest known Kent record was from Alkham, Nr. Dover, published by H. T. Stainton on 1.vi.1859 in the *Manual of British Butterflies and Moths* volume 2.

Mr. A. A. Allen took two cases at Halling during a South London NHS meeting on 29.vi.1958 — neither case was reared. This locality was referred to by Mr. J. M. Chalmers-Hunt in his 1974 Presidential Address, but it should be noted that the date is therein wrongfully referred to as: 29.v. In any case I visited the site on 27.v. 1981 and was disappointed to find the entire valley had been converted to arable and ley-farming for cattle-grazing. — N. F. HEAL, Fosters, Detling Hill, Nr. Maidstone, Kent.

THE FEEDING HABITS OF *PARORNIX* (LEP.: GRACILLARIIDAE).

— With regard to the note from N. F. Heal concerning the presence of *Parornix scoticella* (Stainton) in East Kent, comment on his misleading statement that he reared the moths from "*Phyllonorycter*-type mines" gives me the opportunity to correct a similar mistake of my own.

Parornix spp. mine only when young; the larvae later leave their mines and feed within folded leaves. In the case of *P. scoticella* this fold so closely resembles a mine that it has induced entomologists as distinguished as Professor Hering to suppose that the larva continues mining until it is full-fed. This species occurs on an apple-tree in my garden and I have had the opportunity to observe the larva making this deceptive spinning. Hypermetamorphosis takes place in *Parornix* at the second ecdysis; thereafter the larva's jaws are directed downwards and are used for grazing on the surface of the leaf. It can continue feeding in its mine only until it has finished eating the

parenchyma it can walk over, having been exposed by the removal of the epidermal cells above in the sap-drinking phase. It cannot enlarge the mine by chewing in a horizontal plane, nor can it make a fresh mine. The reason why *Phyllonorycter* can complete their development within their mines is that in their case hypermetamorphosis does not take place until the third ecdysis. Their additional sap-drinking instar enables them to make a larger epidermal mine in which enough parenchyma is exposed to last them until they are full-fed.

The very closely related *P. alpicola* (Wocke) makes an even more mine-like spinning on mountain avens (*Dryas octopetala*) and I incorrectly described it as a mine in *The field guide to the smaller British Lepidoptera* (p.55). Happily this was challenged by Dr. M. R. Shaw. When I sent him old examples of the feeding, he at first tended to agree with me, but after damping the leaves and opening up the feeding places he found that they were in fact folds and not mines. — A. M. EMMET, Labrey Cottage, Victoria Gardens, Saffron Walden, Essex, CB11 3AF.

FREEZE-DRYING LEPIDOPTERA — AND A NOTE OF CAUTION. — For those such as myself who are fortunate enough to have access to the equipment, freeze-drying is an excellent method of preserving entomological specimens in all Orders, pinned or otherwise, without risk of distortion or loss of colour. It must surely be the most favoured method for drying pinned Odonata, in which Order the abdominal colours are very prone to fading. Its application extends to all other insects and other invertebrates where the retention of colour and morphological characteristics of the abdomen and other "soft-parts" are required. At the Passmore Edwards Museum, I use the technique on the wingless females of *Orgyia antiqua*, *Operophtera brumata* and other species which look most un-attractive in the cabinet if their abdomens have shrivelled — having no wings to catch the eye of the observer. The technique also works well on many 'micros' whose abdomens shrink to such an extent that they often all but disappear. The value of freeze-drying for display work is enormous, particularly for larvae.

My note of caution however, involves the use of plastazote as a setting medium. I normally use small squares of 7mm plastazote, cutting a groove with a scalpel blade, thus I can create a "perfect" groove for each specimen in very few moments. Recently however, I used a sheet of 7mm plastazote measuring about 15 x 20 cms, on which several specimens were pinned, and left this in the bottom of an Edwards EF — 2 freeze-drier for 15 days over the Christmas period. When I removed this from the freeze-drier, I found that it had distorted considerably and had, as a result ruined several specimens.

I cannot say why this distortion occurred, nor can I say whether the size of the sheet or the length of the run had any bearing on the